

RECEIVED  
CENTRAL FAX CENTER

JAN 03 2007

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (currently amended) An electrically driven turf maintenance machine, which comprises:

(a) a frame;

(b) a plurality of ground engaging wheels attached to the frame for supporting the frame for movement over the ground;

(c) at least one electric motor operatively connected to at least one of the ground engaging wheels for propelling the wheel to provide traction for the frame;

(d) ~~at least one operating unit a plurality of reel cutting units carried on the frame for performing a turf maintenance operation mowing grass, wherein each reel cutting unit comprises a rotatable cutting reel that sweeps grass against a sharpened bedknife for cutting the grass;~~

(e) ~~a plurality of electric motors for driving the plurality of reel cutting units with at least one electric motor being carried on each reel cutting unit operatively connected to at least one operating unit for powering the operating unit rotatable cutting reel of each reel cutting unit; and~~

(f) an electric drive system carried on the frame for providing electric power to the electric motors, the electric drive system comprising:

(i) an internal combustion engine;

(ii) an electric power generating device mechanically driven by the engine for supplying electric power;

(iii) a battery power source for supplying electric power; and

(iv) an electric power supply circuit ~~for connecting connected to the electric motors to the electric power generating device and to the battery power source to allow electric power to be supplied to supply electric power~~ to the electric motors at least from either the electric power generating device or from both the electric power generating device and battery power source.

2. (original) A machine as recited in claim 1, further including a switch for shutting off the internal combustion engine to thereby disable the electric power generating device, thereby making the battery power source the sole source of electric power for the electric motors.

3. (currently amended) A machine as recited in claim 2, whereby the switch is selectively operable under the control of a user of the machine to allow the user to select when the battery power source shall serve as the sole source of ~~electric~~ electric power for the electric motors.

4. (canceled)

5. (currently amended) A machine as recited in ~~claim 4~~ ~~claim 3~~, further including a display having a plurality of indicator lights for indicating to a user of the machine ~~when the state~~ different states of charge of the battery power source ~~is below a predetermined minimum level to allow the user to determine if it is appropriate for the switch to be thrown to select the battery power source as the sole source of electric power, wherein the indicator lights comprise at least a first indicator light that is lit when the battery~~

power source is substantially fully charged, a second indicator light that is alternatively lit when the battery power source is relatively discharged, and a third indicator light that is alternatively lit when the battery power source has an intermediate state of charge between the states of charge corresponding to the lighting of the first and second indicator lights.

6. (original) A machine as recited in claim 5, further including means for preventing operation from only the battery power source when the state of charge of the battery power source is below the predetermined minimum level.

7. (original) A machine as recited in claim 1, wherein the electric power generating device is connected to the battery power source to recharge the battery power source during operation of the internal combustion engine.

8. (original) A machine as recited in claim 1, wherein the electric power generating device comprises an alternator.

9. (original) A machine as recited in claim 8, further including a controller for controlling the application of electric power to the electric motors, and wherein the controller is further connected to the magnetic field windings of the alternator to control the operation of the alternator.

10. (original) A machine as recited in claim 1, wherein two of the wheels on the frame are individually driven by separate electric motors each of which are connected to the electric drive system.

11. (original) A machine as recited in claim 10, wherein the machine has a steering wheel to allow the machine

to be turned, and further including a controller for controlling the supply of electric power from the electric drive system to the electric motors, wherein the controller has means responsive to a turn effected by movement of the steering wheel to vary the power supplied to the individual electric motors to effect a differential action during the turn.

12. (canceled)

13. (canceled)

14 - 22 (canceled)

23. (canceled)

24. (currently amended) A turf maintenance machine, which comprises:

(a) a movable frame;

(b) at least one operating unit electrically powered cutting unit carried on the frame for performing a turf maintenance operation cutting grass;

(c) an electrically powered traction system for propelling the frame; and

(d) a drive system carried on the frame for powering the cutting unit and the traction system, the drive system including:

(i) an internal combustion engine that powers an electric power generating device that at least at various times partially supplies electrical energy to the cutting unit and the traction system at least partially during a first hybrid mode of operation;

(ii) a battery power source that also at least at various times partially supplies electrical energy to the

cutting unit and the traction system during the hybrid mode of operation and that entirely supplies electrical energy to the cutting unit and the traction system powers the traction system entirely during a second an all battery mode of operation; and

(iii) a selectively actuatable switch for selecting between the ~~first and second~~ hybrid and all battery modes of operation.

25. (currently amended) A machine as recited in claim 24, wherein the placement of the switch is selectively actuatable by an operator of the machine into the position that selects the all battery mode of operation only shuts off the internal combustion engine to prevent the internal combustion engine from powering the electric power generating device without the all battery mode switch placement having any other effect on the ability of the electric power generating device to otherwise generate electrical energy.

26. (currently amended) A self-propelled mower comprising:

a frame;

a plurality of ground engaging wheels supporting said frame;

an internal combustion engine outputting mechanical motion;

an electrical generator operably coupled with said internal combustion engine, said electrical generator outputting electrical energy in response to said mechanical motion;

an electric wheel motor operably coupled between said electrical generator and at least one of said plurality of ground engaging wheels for driving said at least one ground engaging wheel in response to said electrical energy; and

a cutting device supported by said frame, said cutting device being operably driven by said internal combustion engine.

27. (previously presented) The self-propelled mower of claim 26, further comprising:

a gear reduction device operably coupled between said electric wheel motor and said at least one ground engaging wheel.

28. (currently amended) A self-propelled mower comprising:

a frame;

a plurality of ground engaging wheels supporting said frame;

an internal combustion engine outputting mechanical motion;

an electrical generator operably coupled with said internal combustion engine, said electrical generator outputting electrical energy in response to said mechanical motion;

an electric wheel motor operably coupled between said electrical generator and at least one of said plurality of ground engaging wheels for driving said at least one ground engaging wheel in response to said electrical energy;

a cutting device supported by said frame, said cutting device being operably driven by said internal combustion engine; and

a main controller operably coupled to at least one of said cutting device and said electric wheel motor.

29. (previously presented) The self-propelled mower of claim 28, further comprising:

a gear reduction device operably coupled between said electric wheel motor and said at least one ground engaging wheel.

30. (new) A method of cutting grass on a golf course, which comprises:

(a) providing an electrically powered mower that is powered by a hybrid electrical power supply system comprising an internal combustion engine rotating an electric power generating device in combination with a battery storage device, and wherein the reel mower includes a switch that selectively enables operation of the internal combustion engine during a hybrid mode of operation with the switch being actuated to shut off the internal combustion engine during an all battery mode of operation;

(b) operating the reel mower in the hybrid mode of operation to cut grass on portions of a golf course where noise is not objectionable at the time the golf course portions are being cut; and

(c) switching from a hybrid mode of operation to the all battery mode of operation to cut grass on the golf course portions where noise is objectionable at the time the golf course portions are being cut.

31. (new) The method of claim 30, further including the step of operating the reel mower in the hybrid mode of operation when transporting the reel mower from one golf course portion to another golf course portion.

32. (new) The method of claim 30, wherein the portions of the golf course being cut are greens on the golf courses.

33. (new) An electrically driven turf maintenance machine, which comprises:

- (a) a frame;
- (b) a plurality of ground engaging wheels attached to the frame for supporting the frame for movement over the ground;
- (c) at least one electric motor operatively connected to at least one of the ground engaging wheels for propelling the wheel to provide traction for the frame;
- (d) a plurality of reel cutting units carried on the frame for mowing grass, wherein each reel cutting unit comprises a rotatable cutting reel that sweeps grass against a sharpened bedknife for cutting the grass;
- (e) a plurality of electric motors for driving the plurality of reel cutting units with at least one electric motor being carried on each reel cutting unit for powering the rotatable cutting reel of each reel cutting unit; and
- (f) an electric drive system carried on the frame for providing electric power to the electric motors, the electric drive system comprising:
  - (i) an internal combustion engine;
  - (ii) an electric power generating device mechanically driven by the engine for supplying the electric power;
  - (iii) a battery power source for supplying the electric power; and
- (g) a display having a plurality of current draw indicators for the motors powering the reel cutting units so that the current draw from each reel cutting unit is displayed to an operator of the mower.

34. (new) The machine of claim 33, wherein the current draw indicators each comprise a variable length band whose length is related to the current draw with the band being longer when the current draw is higher and shorter when the current draw is lower.